



# LANDON TOMPKINS

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## PROFESSIONAL SUMMARY

Experienced Biomedical and Mechanical Engineer well-versed in leading designs from concept through delivery and marrying multiple disciplines to produce cutting-edge products. Leverages experience and advanced knowledge of cardiovascular, structural heart, surgical, and mechanical circulatory support (MCS) devices to continuously optimize and innovate designs. Highly technical and focused on problem-solving. Eager to collaborate with focused teams and manage multiple projects.

## SKILLS

- Medical device development and research (Class III)
- Expertise in structural heart, mechanical circulatory support, and ventricular assist devices
- Mechanical design
- Project management
- Technical problem-solving
- Pre-clinical testing and evaluation (*In vitro* and *In vivo* studies)
- Design review and documentation
- Regulatory compliance
- Study design and protocol drafting
- Technical and grant writing (multiple peer-reviewed publications and awarded grants)
- SolidWorks CAD, FEA, and CFD analysis
- Microsoft Office Suite

## WORK HISTORY

**Senior Engineer /Engineering Project Manager** | Inspired Therapeutics, LLC - Merritt Island, FL 01/2021 - CURRENT

- Manage mechanical design and hemodynamic performance development of new pediatric mechanical circulatory support device.
- Responsible for impeller and pump housing technical design and optimization (SolidWorks (CAD) and SolidWorks Flow Simulation (CFD)).
- Aid in fabrication and testing of prototype systems in bench-top and mock circulatory loop models.
- Serve as Project Manager, coordinating development efforts between pump development, controller development (electronics), motor development (MagLev), and research efforts with academic partners.
- Drafted original research manuscripts published in peer-reviewed journals.

**R&D Engineering Consultant** | VADovations Inc. - Oklahoma City, OK 08/2020 - CURRENT

- Part-time consultant offering expertise in ventricular assist device and transcatheter system development.
- Coordinating development of concept, procedure, and preliminary prototyping for new right-heart anchoring technology to couple with VADovations VAD device for transcatheter delivery and implantation.

**Director of Engineering** | MAST LLC - Louisville, KY 09/2018 - 07/2022

- Directed development of two novel surgical tools to aid in implantation of ventricular assist devices, from concept stage through prototype feasibility in vitro testing.
- Competed for and were awarded two NIH Small Business Innovation and Research (SBIR) Phase I grants to complete development and testing for both projects.
- Responsible for complete mechanical design (SolidWorks), prototype fabrication, and study design for both projects.

**Senior Biomedical Research Engineer** | Cor Habere Corp. - Louisville, KY  
09/2018 - 09/2020

- Lead mechanical engineering efforts for design and development of new Left Atrial Appendage (LAA) closure device.
- Responsible for designing and fabricating multiple iterations of device as well as steerable catheter delivery tool.
- Aided in bench-top in vitro testing of multiple iterations of system as well as drafting of research manuscripts published in peer-reviewed journals.

**Graduate Researcher** | University Of Louisville - Louisville, KY  
08/2015 - 09/2018

- Member of Advanced Heart Failure Research (AHFR) group at Cardiovascular Innovation Institute (CII) during completion of doctoral research.
- Headed or aided in *in vitro* (static and dynamic mock circulatory loops) and *in vivo* (acute and chronic large animal model studies) research and testing of multiple emerging cardiovascular and MCS devices from industry.

**Director of Engineering** | SCR Inc. - Louisville, KY 11/2013 - 05/2015

- Lead design, development, and testing of multiple cardiovascular, medical, and sports therapy devices and projects.
- Competed for and were awarded multiple NIH SBIR Phase I and II grants to complete research and development of these projects.
- Aided with drafting and acquisition of original IP.
- Participated in marketing of devices to larger entities for license or acquisition.

**Biomedical Engineer** | SCR Inc. - Louisville, KY 08/2009 - 11/2013

- Contributed to research and development of multiple structural heart and mechanical circulatory support projects.
- Collaborated in attaining and completing multiple Phase I and II NIH SBIR grants and multiple state matching KSTC (Kentucky Science and Technology Corporation) grants.

**Aircraft Performance Engineering Co-op** | UPS - Louisville, KY  
01/2008 - 08/2009

- Co-op work study during undergraduate career.
- Performed multiple tasks in Performance Engineering division over three separate semesters of study.
- Responsible for aircraft weight and balance, route planning, and takeoff and landing procedures.

## EDUCATION

University of Louisville, Louisville, KY 12/2020  
**Ph.D.:** Translational Bioengineering

University of Louisville, Louisville, KY 08/2011  
**Master of Engineering:** Mechanical Engineering

University of Louisville, Louisville, KY 08/2010  
**Bachelor of Science:** Mechanical Engineering

**Full Curriculum Vitae Provided on Request**